

MULTI-FEATURED ARRAYS WITH REFLECTIVE COATING**ABSTRACT OF THE DISCLOSURE**

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A method and apparatus of interrogating an addressable array unit, which includes a substrate, a light reflecting layer on a front side of the substrate, and a plurality of features on a front side of the array. The method may include, for each of multiple features, illuminating the feature simultaneously with reflected and non-reflected interrogating light. A light emitted from respective features is detected. Either or both, constructive interference of interrogating light at the features, or constructive interference of light emitted from the features, can be obtained to allow lowering of light power from the source, enhanced signal, or reduced noise, or combinations of the foregoing. High depth discrimination may also be obtained without the need for a confocal detection system with conventional pinhole.

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